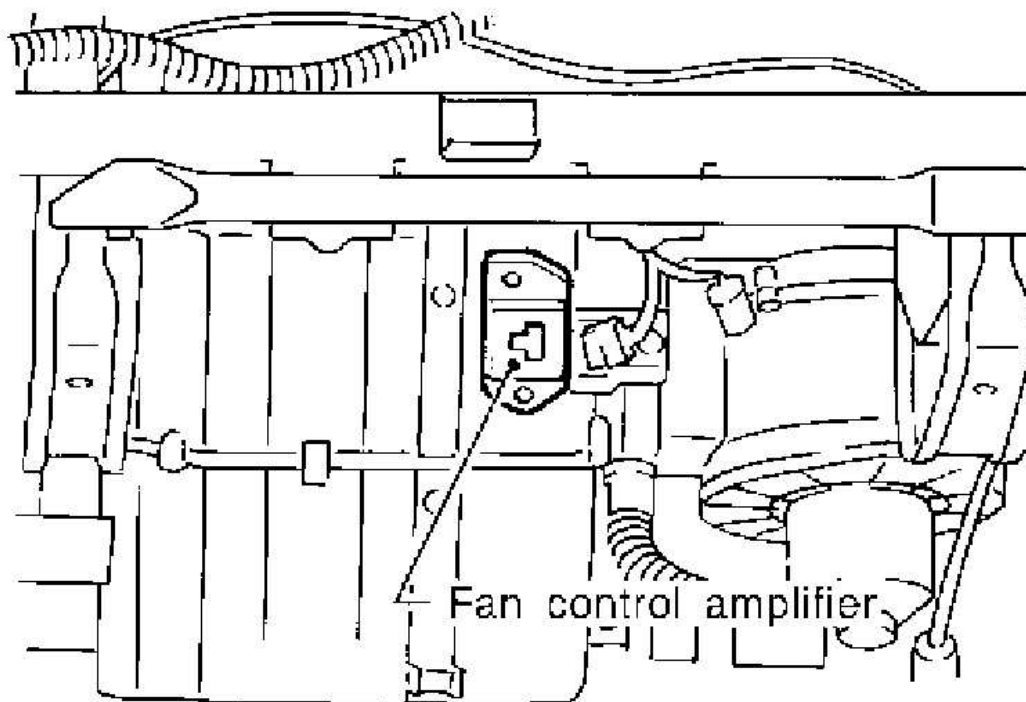


Fan Control Amplifier

The fan control amplifier is located on the cooling unit. The fan control amp. receives a gate voltage from the auto amp. to step-lessly maintain the blower fan motor voltage in the 5 to 12 volt range (approx.).



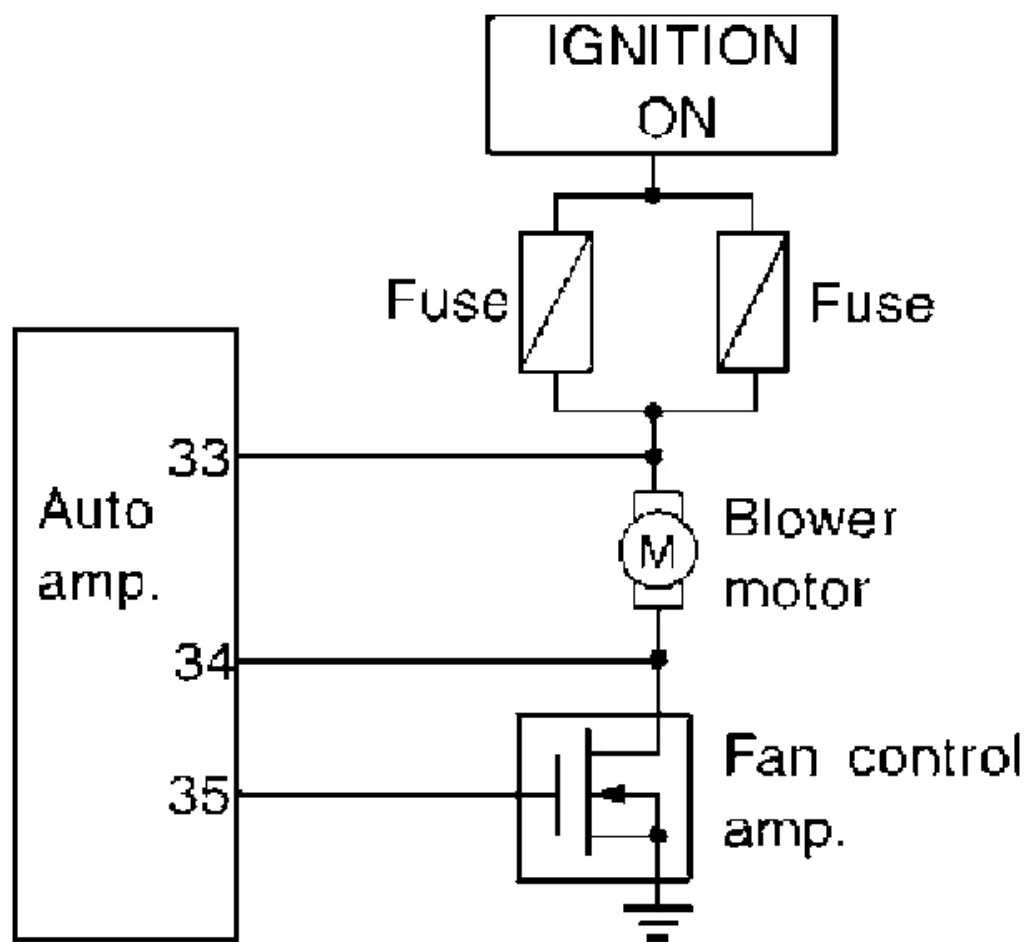
G02035307

[Fig. 169: Identifying Fan Control Amplifier](#)

Courtesy of NISSAN MOTOR CO., U.S.A.

DIAGNOSTIC PROCEDURE

SYMPTOM: Blower motor operation is malfunctioning under Starting Fan Speed Control.



G02035308

Fig. 170: Auto Amp Blower Communication Circuit Diagram

Courtesy of NISSAN MOTOR CO., U.S.A.

1. CHECK POWER SUPPLY FOR FAN CONTROL AMP.

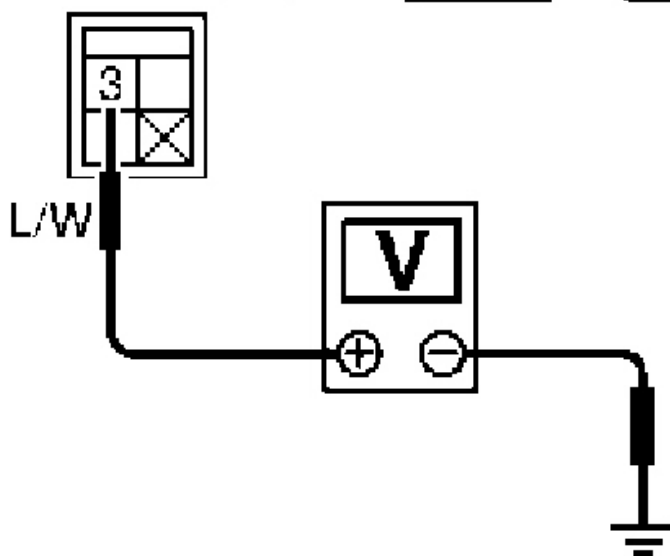
Disconnect fan control amp. harness connector.

Do approx. 12 volts exist between fan control amp. harness connector terminal No. 3 and body ground?

Fan control amp.
connector (M60)



DISCONNECT



G02035309

Fig. 171: Checking Voltage Between Fan Control Harness Connector Terminal No 3 And Body Ground

Courtesy of NISSAN MOTOR CO., U.S.A.

Yes or No

Yes: GO TO 2.

No: GO TO 8 .

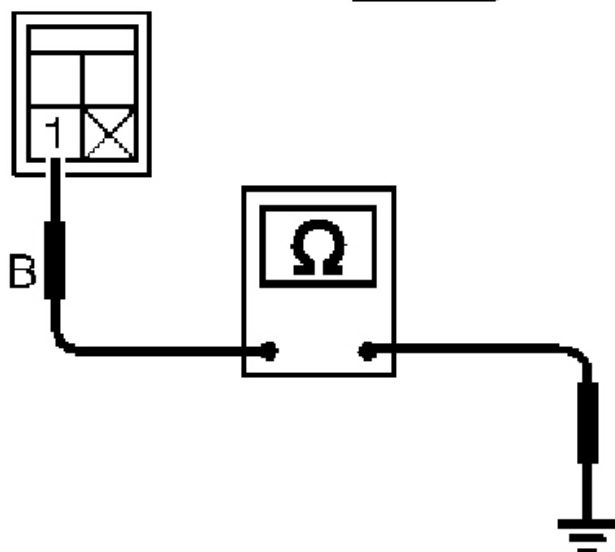
2. CHECK BODY GROUND CIRCUIT FOR FAN CONTROL AMP.

Does continuity exist between fan control amp. harness connector terminal No. 1 and body ground?

Fan control amp.
connector (M60)



DISCONNECT



G02035310

Fig. 172: Checking Continuity Between Connector Terminal No 1 And Body Ground
Courtesy of NISSAN MOTOR CO., U.S.A.

Yes or No

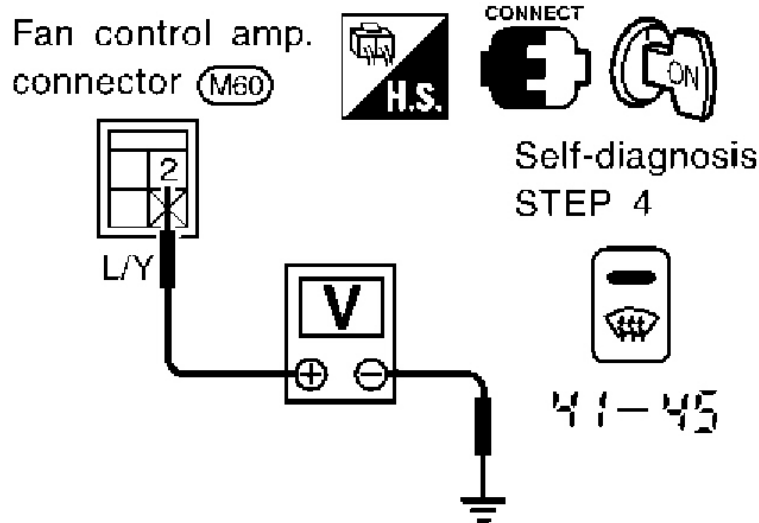
Yes: Reconnect fan control amp. harness connector. And GO TO 3.

No: Repair harness or connector.

3. CHECK VOLTAGE FOR FAN CONTROL AMP.

Set up Self-diagnosis STEP 4.

Measure voltage across fan control amp. harness connector terminal No. 2 and body ground.



Code No.	Terminal No.		Voltage
	(+)	(-)	
41 - 45	(2)	Body ground	Approx. 2.5 - 3V

G02035311

Fig. 173: Measuring Voltage Across Fan Control Amp Harness Connector Terminal No. 2 And Body Ground

Courtesy of NISSAN MOTOR CO., U.S.A.

OK or NG

OK: GO TO 5 .

NG:

- The voltage is less than 2.5V. Replace fan control amp.
- The voltage is more than 3.0V. GO TO 4.

4. CHECK FAN CONTROL AMP.

Refer to **FAN CONTROL AMP.**

OK or NG

OK: GO TO 5.

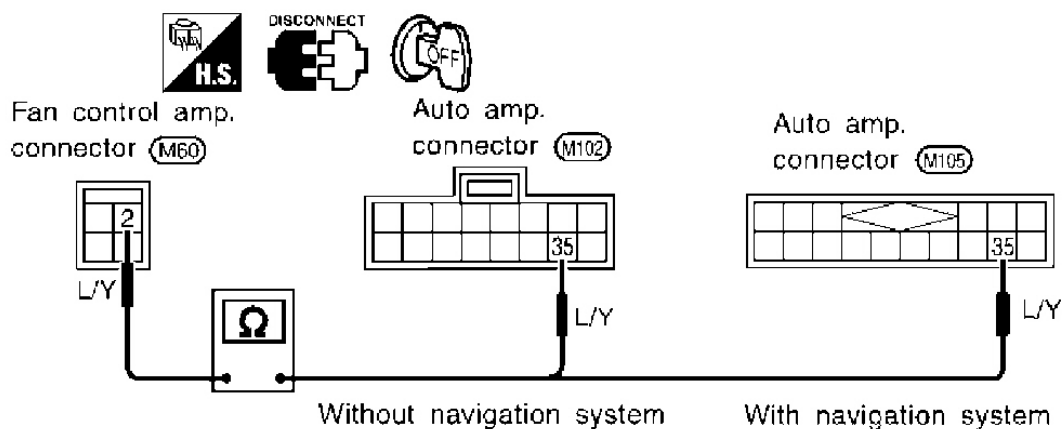
NG:

1. Replace fan control amp.
2. Go to "STEP-BY-STEP PROCEDURE", (**WITHOUT NAVIGATION SYSTEM (EXCEPT LE GRADE)**), (**WITHOUT NAVIGATION SYSTEM (LE GRADE)**) or (**WITH NAVIGATION SYSTEM**) and perform self-diagnosis STEP 4.

Confirm that blower motor operation is usual.

5. CHECK FAN CONTROL AMP. CIRCUIT BETWEEN FAN CONTROL AMP. AND AUTO AMP. (LCU)

1. Disconnect auto amp. (LCU) and fan control amp. harness connector.
2. Check circuit continuity between auto amp. (LCU) harness connector terminal No. 35 and fan control amp. harness connector terminal No. 2.



G02035312

Fig. 174: Checking Continuity Between Harness Connector Terminal No. 35 And Fan Control Amp. Harness Connector Terminal No. 2

Courtesy of NISSAN MOTOR CO., U.S.A.

Continuity should exist.

If OK, check harness for short.

OK or NG

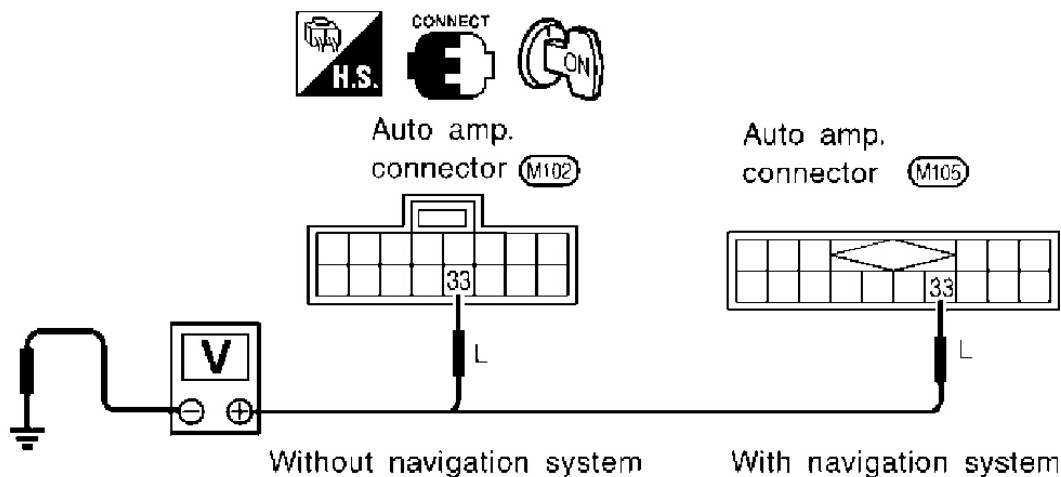
OK: GO TO 6.

NG: Repair harness or connector.

6. CHECK POWER SUPPLY FOR AUTO AMP.

Reconnect auto amp. (LCU) harness connector.

Do approx. 12 volts exist between auto amp. (LCU) harness connector terminal No. 33 and body ground?



G02035313

Fig. 175: Checking Voltage Between Auto Amp. (LCU) Harness Connector Terminal No. 33 And Body Ground

Courtesy of NISSAN MOTOR CO., U.S.A.

Yes or No

Yes: GO TO 7.

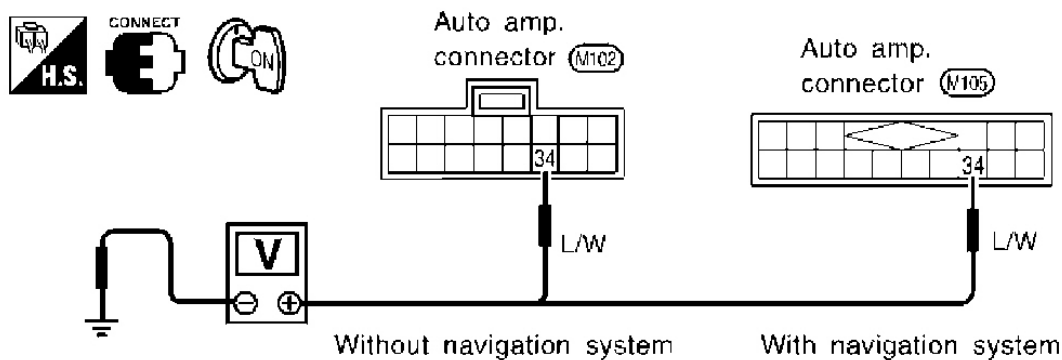
No: Check power supply circuit and 15A fuses [Nos. 1 and 2, located in the fuse block - junction box (J/B)].

Refer to "**POWER DISTRIBUTION**".

- If OK, check for open circuit in wiring harness.
Repair or replace as necessary.
- If NG, replace fuse and check wiring harness for short circuit.
Repair or replace as necessary.

7. CHECK FAN FEED BACK CIRCUIT

Do approx. 12 volts exist between auto amp. harness connector terminal No. 34 and body ground?



G02035314

Fig. 176: Checking Voltage Between Auto Amp. Harness Connector Terminal No. 34 And Body Ground

Courtesy of NISSAN MOTOR CO., U.S.A.

Yes or No

Yes:

1. Replace auto amp.
2. Go to self-diagnosis step-by-step procedure (**WITHOUT NAVIGATION SYSTEM (EXCEPT LE GRADE)**), (**WITHOUT NAVIGATION SYSTEM (LE GRADE)**) or (**WITH NAVIGATION SYSTEM**) and perform self-diagnosis STEP-4.

Confirm that blower motor operation is usual.

No: GO TO 10 .

8. CHECK POWER SUPPLY FOR BLOWER MOTOR

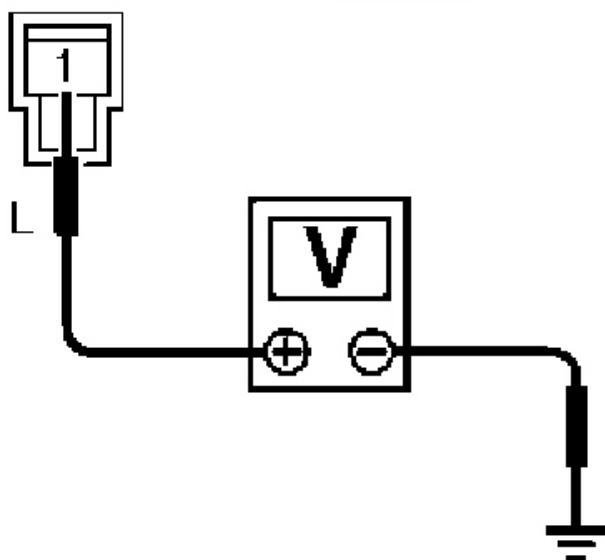
Disconnect blower motor harness connector.

Do approx. 12 volts exist between blower motor harness connector terminal No. 1 and body ground?

Blower motor
connector (M73)



DISCONNECT



G02035315

Fig. 177: Checking Voltage Between Blower Motor Harness Connector Terminal No. 1 And Body Ground

Courtesy of NISSAN MOTOR CO., U.S.A.

Yes or No

Yes: GO TO 9.

No: **Check power supply circuit and 15A fuses [Nos. 1 and 2, located in the fuse block - junction box (J/B)].**

- If OK, check for open circuit in wiring harness.

Repair or replace as necessary.

- If NG, replace fuse and check wiring harness for short circuit.

Repair or replace as necessary.

9. CHECK CIRCUIT CONTINUITY BETWEEN BLOWER MOTOR AND FAN CONTROL AMP.

Disconnect blower motor connector and auto amp. (LCU) connector.

Check circuit continuity between blower motor harness connector terminal No. 2 and fan control amp. harness connector terminal No. 3.

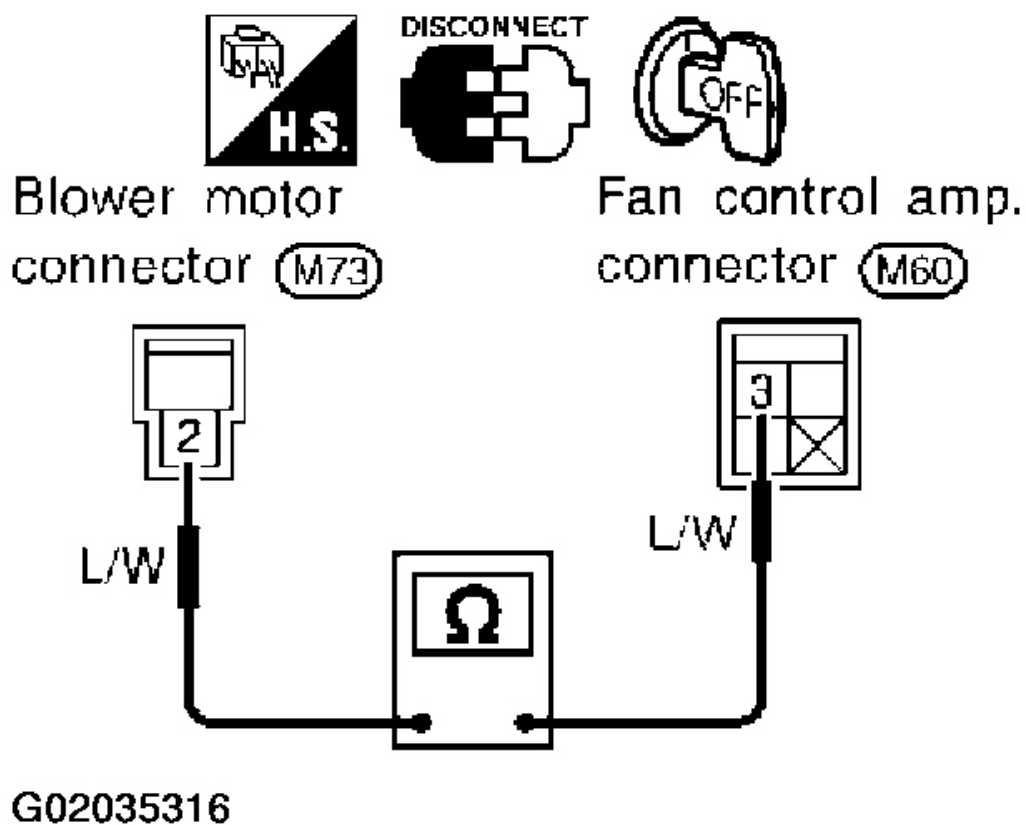


Fig. 178: Checking Circuit Continuity Between Blower Motor And Fan Control Amp
 Courtesy of NISSAN MOTOR CO., U.S.A.

OK or NG

OK: Check **BLOWER MOTOR** .

1. If NG, replace blower motor.
2. Go to self-diagnosis step-by-step procedure (**WITHOUT NAVIGATION SYSTEM (EXCEPT LE GRADE)**), (**WITHOUT NAVIGATION SYSTEM (LE GRADE)**) or

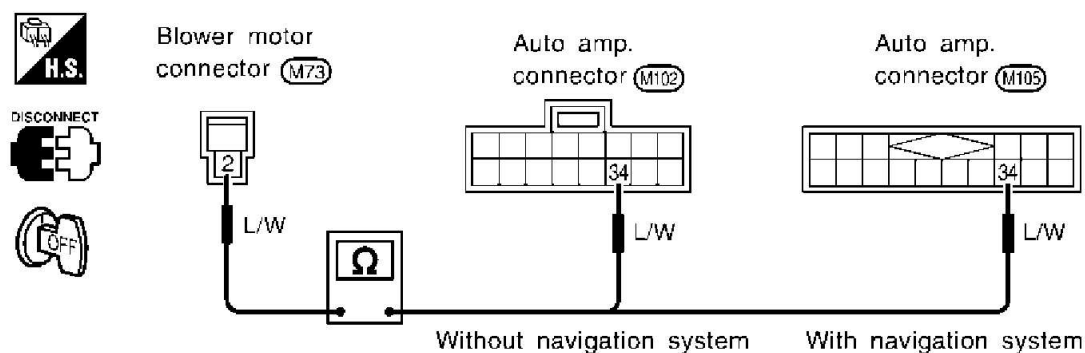
(**WITH NAVIGATION SYSTEM**) and perform self-diagnosis STEP-4.

Confirm that blower motor operation is usual.

NG: Repair harness or connector.

10. **CHECK BLOWER MOTOR CIRCUIT BETWEEN BLOWER MOTOR AND AUTO AMP. (LCU)**

Check circuit continuity between blower motor harness connector terminal No. 2 and auto amp. (LCU) harness connector terminal No. 34.



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Fig. 179: Checking Continuity Between Blower Motor Harness Connector Terminal No. 2 And Auto Amp. (LCU) Harness Connector Terminal No. 34

Courtesy of NISSAN MOTOR CO., U.S.A.

Continuity should exist.

OK or NG

OK: Check harness for short.

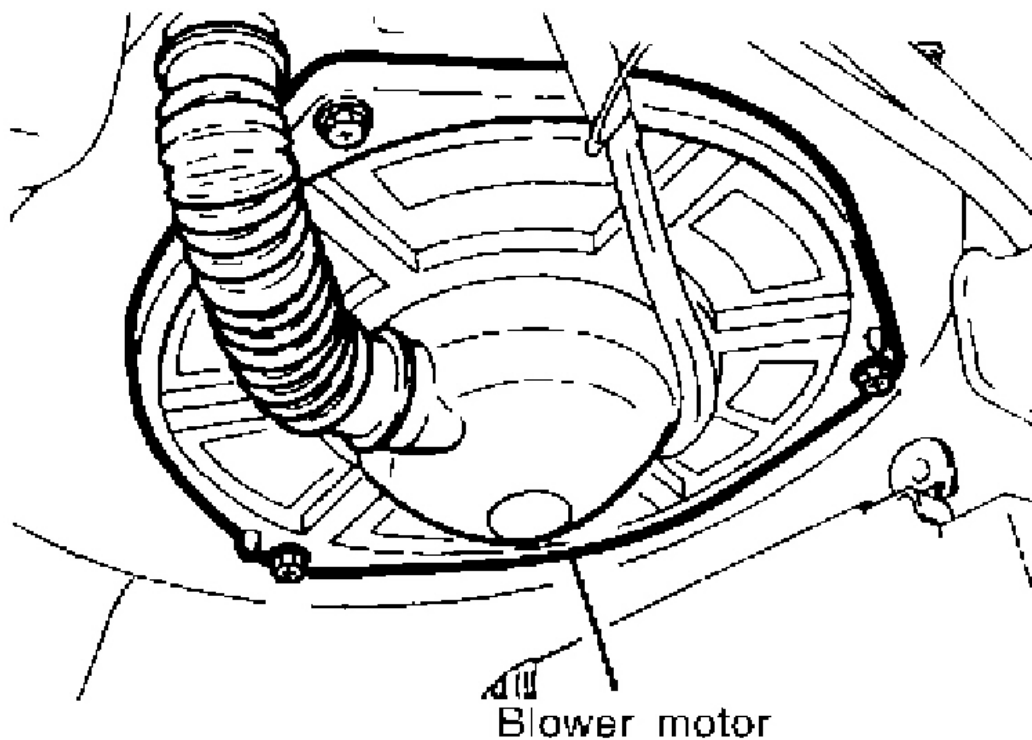
NG: Repair harness or connector.

COMPONENT INSPECTION

Blower Motor

Confirm smooth rotation of the blower motor.

- Ensure that there are no foreign particles inside the intake unit.



G02035318

Fig. 180: Identifying Blower Motor
Courtesy of NISSAN MOTOR CO., U.S.A.

Fan Control Amp.

Check continuity between terminals.

2003 Nissan Pathfinder SE

2003 HVAC Heater & Air Conditioner - Auto - Pathfinder

Ohmmeter terminal		Continuity
(+)	(-)	
Terminal Nos.		Yes
2	1	

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[Fig. 181: Terminal Continuity Chart](#)

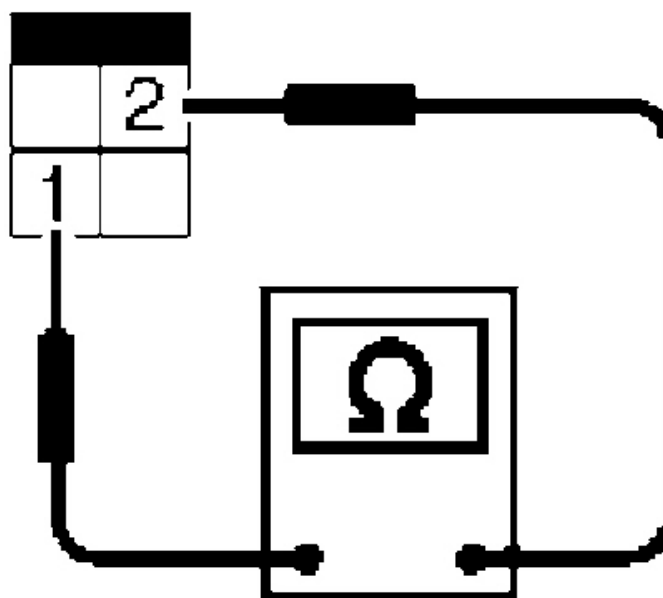
Courtesy of NISSAN MOTOR CO., U.S.A.



DISCONNECT



Fan control amp.
connector (M60)



G02035320

Fig. 182: Checking Continuity Between Terminals 1 And 2

Courtesy of NISSAN MOTOR CO., U.S.A.